

Winnebago Tribe Reviews 2024–2025 Mercury Levels in Rainwater

Understanding trends to protect our land, water, and traditional ways

Winnebago Environmental Protection Department

The Winnebago Tribe of Nebraska’s Environmental Protection Department has completed its annual review of mercury levels measured in rainwater and snow at the Mercury Deposition Network (MDN) monitoring site NE25 for calendar years 2024 and 2025.

Samples collected at the site are sent to the National Atmospheric Deposition Program (NADP) laboratory for detailed analysis. Because of laboratory processing and quality assurance requirements, there is typically a three-to five-month lag between when precipitation falls and when results are available. This is why the Tribe reviews complete previous years once the data is finalized and validated.

What the 2024–2025 Data Shows

Recent data from the Winnebago Tribe’s Mercury Deposition Network site (NE25) shows that mercury concentrations in rainwater remained relatively stable between 2024 and 2025. In 2024, the average mercury concentration in precipitation was **17.0 nanograms per liter (ng/L)**, based on 32 valid samples. In 2025, the average increased slightly to **18.0 ng/L**, based on 38 valid samples.

While the concentration of mercury in each rain or snow event stayed within a similar range, the **total amount of mercury** reaching the ground (called wet deposition) was higher in 2025. This increase was largely driven by greater overall precipitation. In 2025, the site recorded approximately 31.7 inches of precipitation from valid samples, compared to 26.1 inches in 2024. Wetter conditions deliver more total mercury to soils, rivers, and lakes — even when the concentration measured in individual events remains comparable.

Why This Matters to Our Community

Mercury that falls with rain and snow can eventually make its way into fish in our rivers and lakes. Many families in our community continue traditional fishing practices, and the Tribe closely tracks these trends to help inform safe consumption guidance and to protect our waters for future generations.

Most of the mercury reaching our area originates from distant sources — coal-fired power plants, industrial activities, and long-range atmospheric transport from other parts of the United States and from international sources. Local monitoring helps us understand how these broader patterns affect our homelands and traditional resources.

What the Tribe Is Doing

The Environmental Protection Department continues to operate the MDN monitoring site year-round. Results are shared with the Tribe’s Water Program (CAA Section 106) to support integrated air and water protection efforts. This information also informs community education and helps guide the Tribe’s ongoing work under the Clean Air Act to safeguard air quality, water quality, and the health of our people.

The Winnebago Tribe remains committed to protecting our environment and traditional ways of life for future generations. Community members with questions about mercury monitoring, or this report are encouraged to go to the Air Quality webpage at <https://winnebagotribe.com/air-quality/> or contact the Environmental Protection Department.

Sources: *National Atmospheric Deposition Program (NADP) Mercury Deposition Network; U.S. Environmental Protection Agency; Winnebago Tribe of Nebraska MDN Site NE25 data (2024–2025).*